

5G-SAT: Seamlessly Integrating 5G with Satellite Services

Built on the 5G standards, ASTRI's highly customisable base station and terminal physical layer design 5G-SAT is commercially proven and adaptable to meet diverse RAN requirements. Tailored for private networks, it supports multiple chipset and hardware platforms, ensuring supply chain diversity and global deployment flexibility. Continuous innovation enables support for cutting-edge applications, including non-terrestrial networks (NTN) with different satellite systems.

Industry Challenges

- Extremely high computational complexity, real-time processing demand
- Hardware and chipset diversity
- Verification, testing and compliance standards
- Evolving features (e.g. GEO, LEO)

Major Benefits

- Proven expertise in 4G to 5G research, development and commercialisation
- Highly customisable to meet specific RAN needs
- Supports diverse platforms (Intel x86/NXP ARM + Xilinx FPGA, domestic CPU + domestic FPGA)
- Comprehensive testing infrastructure for seamless integration and compliance

Application Areas

- Private network deployment
- NTN and satellite communications
- Critical communications and emergency response
- 5G/6G prototyping

Collaborator(s)

Manufacturers of telecommunications and electronics products

Award(s)

International Exhibition of Inventions Geneva



"5G-SAT" is a smart solutions seamlessly integrating 5G communications technologies with satellite services

